

## NEW MOSQUITOES FROM PERU

(Diptera, Culicidæ)

By HARRISON G. DYAR and FREDERICK KNAB

Very little is known of the mosquito fauna of Peru, although great diversity of conditions in an equatorial country promises great richness. The only species heretofore known to us from Peru have been the following, received for determination at different times: *Culex quinquefasciatus* Say, Ancon, 3 Feb. 1914 (C. H. T. Townsend); *Aedes leucomelas* Lutz, Rio Charape, 18 Sept. 1911 (Townsend); *Aedes calopus* Meigen, Ancon, 3 Feb. 1914 (Townsend); *Anopheles pseudopunctipennis* Theob., San Bartolome, 5,800 feet, 16 Apr. 1913 (Townsend); *Anopheles boliviensis* Theob., Rio Charape, 13 Sept. 1911, Rio Huascaray, 22 Sept. 1911 (Townsend). To these we can now add the following new forms.

**Phalangomyia**, new genus.

Proboscis long, uniform, nearly straight in both sexes, in the male with a false joint near the middle. Palpi short in the female; in the male long and slender, acuminate. Antennæ filiform in the female, the joints with basal whorls of short sparse hairs; in the male sparsely plumose, rather long. Clypeus well developed, nude.

Prothoracic lobes small, lateral. Mesonotum elongate, convex, with longitudinal series of coarse hairs on the disk and laterally. Scutellum weakly trilobate. Postnotum convex, prominent, nude.

Abdomen subcylindrical in the female, truncate at tip; in the male long, slender basally, depressed outwardly.

Legs slender throughout and very long, the three pairs progressively longer but not differing greatly in length; femora and tibiæ of all three pairs of legs of about equal length; first joint of hind tarsi slightly shorter than the tibia; scraper of hind tibia without complete row of spines. Claws simple and small in the female; in the male large, unequal, and each with a single tooth on the front and middle legs.

Wings with the venation as in *Culex*.

**Phalangomyia debilis**, new species.

Female: Proboscis clothed with dark brownish scales. Palpi about one-sixth as long as the proboscis, dark scaled, with a few coarse bristles. Clypeus prominent, narrow, rounded anteriorly, dark brown. Antennæ

rather long and slender, blackish, with white rings at bases of joints; tori small, yellowish. Occiput blackish, clothed with narrow curved yellowish scales, broader and denser white ones along ocular margins, many erect, very slender, forked brown scales dorsally; cheeks white scaled.

Mesonotum dark brown, two bare, narrow, longitudinal lines, the antescutellar space bare, a large bare area laterally on posterior half of disk; scales rather sparse but coarse, narrow curved, yellow-brown, larger pale scales along margins and on posterior half about the three bare zones. Scutellum with pale scales, like those preceding, each lobe with a large group of coarse black bristles. Pleuræ brown, with lanceolate white scales.

Abdomen rather slender, depressed dorsally; dorsal vestiture dull black, the segments with very broad, basal yellowish white bands, the band on the second segment medianly produced to posterior margin, the white on the sixth and seventh segments occupying more than the basal halves, the eighth entirely white scaled; no differentiated lateral spots; venter uniformly dirty white scaled; many long, pale yellowish bristles at posterior margins of segments and ventrally, in appearance approaching the lateral ciliation present in many male mosquitoes.

Legs brownish black, the tibiæ and tarsi with pale luster beneath; femora pale beneath to near apices; knees pale; tibiæ narrowly pale at bases, the tips of all three pairs broadly white; tarsi unbanded. Claw formula, 0.0-0.0-0.0.

Wings hyaline, moderately broad; second marginal cell rather narrow, nearly three times as long as its petiole, second posterior cell slightly longer than its petiole; scales dark brown, paler, yellowish, at tip of wing in a spot involving tip of first vein and apical halves of forks of second vein; outstanding scales long and linear, the others not differentiated; fringe narrow, unicolorous. Halteres dark, scaled throughout.

Length: Body about 5 mm., wing 6 mm.

Male: Palpi slender, nearly uniform, upcurved, exceeding the proboscis by about the length of the last joint; vestiture brownish, without pale rings, rather sparse, short, stiff black hairs at end of long joint and along last two joints. Antennæ rather long; last two joints long, the others shorter, slender, pale, with narrow black rings at insertions of hair-whorls; hairs very long, moderately abundant, brown, shining; tori large, luteous. Coloration similar to the female. Abdomen long, slender near base, depressed beyond; white dorsal bands broader than in the female,

occupying about two-thirds of sixth and seventh segments, eighth wholly white scaled; lateral ciliation long and fine, pale yellowish. Wings nearly as broad as in the female; stems of fork-cells but slightly longer. Claw formula, 1.1-1.1-0.0.

Length: Body about 4 mm., wing 4 mm.

Matucana, Peru, 7,300 feet, June-July, 1913 (C. T. Brues).

Types and paratypes in the collections of the U. S. National Museum and of Dr. C. T. Brues; one pair deposited in the British Museum. Type, No. 18361, U. S. Nat. Mus.

Male genitalia: Side pieces from above broadly conical, straight within, convex without, about twice as long as the greatest diameter, sparsely covered with short hairs, a few long ones on the outer side and a row of about seven long ones closely crowded in a line at the tip before the insertion of the clasp filament. Beneath the inner area of the piece is cut away to two-thirds of its base, but not any at the tip. The remainder of the piece forms a ridge, elongate, about three times as long as wide, deeply excavate on the inner side in the central third, regularly convex without, the tip shortly truncate at the insertion of the clasp filament; the inner angle basally of the emargination is densely hairy, with distinct tubercles; beyond the emargination is a large dark chitinous cone, from the outer aspect of which arise (1) a heavy brown rod which expands beyond the middle into a half-disk and ends in a digitate point, and (2) a long thin leaf-like appendage, hardly widening outwardly, truncate at tip, its inner and distal edges deeply dentate, spinose, its outer angle prolonged into a long point. Within the emargination of the under side of the side piece is a broadly triangular lobe, its outer angle fitting into and surpassing the emargination, dark and densely tubercular and bearing a brush of densely crowded setæ, especially long and dense at the angle. This triangular lobe is joined by a membrane to a stout chitinous strip on the inner side, at the termination of which are two spine-like rods, inserted in tubercles, with pointed, slightly recurved tips. Clasp filament stout, enlarged a little at the base, bent beyond the middle, where it becomes a little inflated and creased; tip slender, furcate, with two widely divergent points. Harpes broad, triangularly rounded, the inner angle blunt and bearing a dense crown of short spines; outer angle forming a slender recurved spiral. Harpagones small, plate-like, single, bearing three or four stout curved teeth toward the tip. Unci small, narrow, with rounded tips. No basal appendages.

The genitalia are plainly of the *Culex* type, as shown by the presence of the prominence bearing a leaf-like appendage and the tufted harpes. The side pieces are specialized and curiously elaborated, but the undivided harpagones and the presence of the lobe indicate a low origin for this form. The lobe has disappeared from all the *Culex* proper, being seen only in low forms which are not truly *Culex*, such as *C. dyari*, *C. melanurus*, and the species of *Culiseta*. In these the characteristic structures of *Culex* have not appeared; but they are well shown in *Phalangomyia*. This genus, therefore, forms a connecting link between *Culiseta* and *Culex*, nearest to the latter and modified on its own peculiar lines.

### **Aedes epinolus**, new species.

Female: Proboscis black, with a rather broad white ring near the middle. Palpi black, white at tips and in the middle. Occiput clothed medianly with narrow curved yellowish scales, a strip of broad black scales laterally; cheeks white scaled; dorsally many erect truncate yellowish scales. Mesonotum clothed with deep reddish brown scales with golden luster. Abdomen dorsally black scaled, the segments with very narrow, basal, yellowish white bands which do not reach the sides; a series of small yellowish spots dorsally, a pair on the middle of each segment; a series of large pure white spots placed medianly at the sides of the segments; venter yellowish scaled, the apices of the segments white scaled. Legs black, the tarsi with basal pure white rings, broad on the hind legs and with the last joint white on the basal half. Claws toothed on the front and middle legs, simple on the hind pair.

Length: Body about 3.5 mm., wing 3 mm.

Ventanillas and Ancon, Peru, 3 and 4 Feb., 1914 (C. H. T. Townsend). Twenty-five females. Type, No. 18362, U. S. Nat. Mus.

A coast form, closely related to *Aedes taniorhynchus* Wied. and *Aedes niger* Giles, and holding a position intermediate between these two with reference to extent of the tarsal rings. In *taniorhynchus* the last hind tarsal is all white; in *niger* it is almost wholly black. *Aedes niger* occurs exclusively in the Antilles and in southern Florida; therefore it and the new form are separated by territory (Panama) in which only the true *taniorhynchus* occurs. It follows that the new form can not be considered a derivative of *niger*. *Aedes nocturnus* Theobald (Mon. Culic., III, p. 159, 1903), from Fiji, is also closely

related, and we have still another form from the Galapagos Islands (reported by Coquillett as *Culex tæniorhynchus*, Proc. Wash. Acad. Sci., III, 372, 1901), which, however, is in too poor condition to be described. All these forms might, perhaps, be considered geographic races of a single species.

## THE PERICOPID LARVÆ IN THE NATIONAL MUSEUM

(*Lepidoptera, Hysidæ*)

By HARRISON G. DYAR

### **Gnophæla latipennis** Boisduval.

*Larva* : Dyar, Proc. Ent. Soc. Wash., iv, 408, 1900.

The larvæ are uniformly marked, all the segments cross-banded, but the bands fused subdorsally, laterally, and subventrally, until a longitudinal type of marking has been evolved.

### **Composia fidelissima** Herrich-Schäffer.

*Larva* : Dyar, Journ. N. Y. Ent. Soc., iv, 70, pl. iii, 1896.

Dyar, Proc. Ent. Soc. Wash., iv, 408, 1900.

The transverse banding is here developed unequally, joints 5, 6, 9, 10, and 11 being banded, the rest without bands, but the marking is not very prominent, tending to disappear in the last stage.

### **Composia sybaris** Cramer.

This larva is uniformly banded, pale yellow, the bands on joints 5 to 11 black and blue, on joints 2 to 4 and 12 to 13 red, as are the head and anal shield; there are subdorsal and subventral rows of quadrate black-purple spots on the segments anteriorly in the incisures of joints 6 to 11; feet broadly red. Hairs sparse, short, black, with single long subdorsal white ones from joints 3 and 12 as in *Composia fidelissima*. Warts also as in that species.

### **Lauron vinosa** Drury.

*Sphinx vinosa* Drury, Ill. Exot. Ent., i, pl. 23, f. 4, 1773.

*Noctua horologica* Goeze, Ent. Beytr., iii, (3), 242, 1779 [not seen].

*Dioptris rica* Hübner, Beiträge zur Samml. exot. Schmett., iii, 31, ff. 531-532, 1825.

*Callimorpha ?vinosa* Drury, Westwood's edition, i, 43, pl. xxiii, f. 4, 1837.

*Dioptris ergolis* Walker, Cat. Brit. Mus., Lep. Het., ii, 335, 1854.

*Lauron domingonis* Butler, Cist. Ent., ii, 120, 1876.